

ABSTRACT

The present invention concerns a method of protecting plants from pathogen attack through synergistic disease resistance attained by applying a conventional microbicide to immunomodulated plants. Immunomodulated plants are those in which SAR is activated and are therefore referred to as "SAR-on" plants. Immunomodulated plants may be provided in at least three different ways: by applying to plants a chemical inducer of SAR such as BTH, INA, or SA; through a selective breeding program based on constitutive expression of SAR genes and/or a disease-resistant phenotype; or by transforming plants with one or more SAR genes such as a functional form of the *NIM1* gene. By concurrently applying a microbicide to an immunomodulated plant, disease resistance is unexpectedly synergistically enhanced; i.e., the level of disease resistance is greater than the expected additive levels of disease resistance.